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An inaugural essay on Cynanche Trachealis.
submited to the provost and faculty
of the
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for
the degree of M. D.
by
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of
North Carolina.

Philadelphia.
November 24th 1821

admitted March 16th 1822

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An inaugural essay on Cynanche Trachealis.

The name by which this disease is known among the vulgar is Hives, supposed to be a corruption of the word heaves, from the manner in which a patient labouring under it, heaves his chest in breathing. It has received, by authors, various names, such as suffocatio stridula, cynanche trachealis, trachitis, a pleurisy of the windpipe &c. This is one of the diseases of the respiratory system, according to the nosology adopted by professor Chapman. It was described by Dr. Home, a professor at Edinburg, as a new disease and consequently secured to himself all the honour of having first described and brought into notice this formidable disease; but professor Chapman strips him of this honour by proving that it was described by an earlier writer. Dr. Home's description of it was written about the middle of ~~the seventeenth~~ 18th century.

Cynanche Trachealis is divided into spasmodic and inflammatory; the former when it attacks very

suddenly and runs its course very rapidly, and when upon dissection, there is no appearance of inflammation; the latter, when it comes on more gradually, is longer in running through its different stages, and is attended with the usual symptoms of inflammation. Dissections, post mortem, shew this disease to consist in the former case, in a spasmodic contraction of the muscles of the glottis producing suffocation; and in the latter an inflammation of the membrane lining the internal surface of the trachea. The division of croup into inflammatory and spasmodic is altogether superfluous and unnecessary, inasmuch as it frequently partakes both of spasm and inflammation, and whether it does or not, the treatment in both cases is the same.

The disease under consideration is confined almost exclusively to children, mostly from the age of one to that of five years; but we sometimes meet with it, though very rarely, in adults, and even in advanced age; an instance of which is afforded by the

illustrious Washington who died of this disease.
I come now to the causes of this disease; and here I will say a few words against the idea of its specific and contagious nature. The advocates of this opinion say, that if it were not of a specific nature and entirely different from what we conceive to be its most frequent form viz. a common catarrh, we should frequently find membranes formed on the internal surface of the trachea in consequence of slight catarrhal affections. Now, to confute this argument, I presume it will only be necessary to prove that that species of inflammation which results in the formation of a membrane on a solid body, by an effusion of coagulable lymph, is not confined to the trachea; and to this end we have the authority of Dr. Scarpa who has proven that the membrana decidua, the membranes on the internal surface of the pleura and intestines are dependant upon the same process; and I have seen one formed in the urethra by

the inflammation of that passage, consequent to the application of a blister. Theoreal causes of this disease are cold and dampness, particularly when combined; sudden changes of weather &c; hence its more frequent occurrence in winter than in summer, in northern than in southern latitudes. It is said by some to be occasionally epidemick. It is likewise said to be endemial to some places.

The premonitory signs, of an attack of croup, are stupidity and inactivity, heavy and suffused eyes, and these symptoms are accompanied with a cough of a peculiar sound, compared, by authors, to the barking of a little dog. Shortly after the appearance of these symptoms, the patient is attacked with a shivering succeeded by flushings of heat, similar to an attack of common synocha. Now all the symptoms become very much aggravated, respiration is performed with the utmost difficulty attended with a shrill sound during inspiration as if the passage of the trachea were straitened and very

much contracted; the countenance is suffused and wild, and the patient throws back his head to prevent immediate suffocation. There is sometimes a considerable degree of nausea and vomiting in the first stage of the disease*. The pulse is strong and quick with much febrile heat. We are, however, not always favoured with the premonitory signs, above enumerated, to warn us of approaching danger; but on the contrary, it sometimes makes its attack suddenly and in the night, the patient awaking afflicted with all the symptoms above mentioned. Either this is the case, the most violent symptoms sometimes remit during the day and recur again at night. As the disease advances, the symptoms become more and more urgent, until at length, if relief be not obtained, suffocation closes the scene. Croup may be distinguished from acute asthma, to which it bears, in some of its forms, a close resemblance, by the following diagnosticks: The former is attended with a frequent shrill cough, whereas in the

* vide Thomas's Practice of Physick

latter there is little or no cough; in croup there is not often any remission, in asthma it is one of the most prominent symptoms, and it is generally attended with some evacuation, as purging, vomiting eructation &c. In croup, the pulse is frequent and strong with much febrile heat, and the voice is small and shrill; in asthma the pulse may, perhaps, be equally quick but not so full, and the voice is dull and croaking. On the first appearance of the premonitory symptoms an active emetick will frequently check the farther progress of the disease, and if it does not arrest it at once, it greatly abates the violence of its subsequent stage. But if the emetick should not have the desired effect, we should detract blood from the arm, and if this be impracticable as is sometimes the case in very young subjects, we may open a vein in any other part of the body where it is most convenient, from which a sufficient quantity of blood may be taken; we should at the same time repeat the emetick, and here I will observe, that in consequence of the great

insensibility of the stomach in this disease, the emetick medicine, which should be tart. ant., should be given in very large quantities and often repeated, until it vomits actively, which may be very much promoted by placing the patient in a warm bath. When the medicine has operated actively, it will generally be found that the disease has given way. But should the attack still remain obstinate, it will be necessary to place the patient in a warm bath and bleed ad deliquium animi. When pushed to this extent, it is said, the lancet never fails. After general bleeding has been carried as far as may be advisable, we must resort to topical bleeding with cups and leeches and the application of a large blister to the throat, reaching from one ear to the other. At this stage of the disease, mercury (or in other words) calomel should be given in large and frequently repeated doses, so as to induce active purging. This is a remedy of very great importance in completing and establishing the cure. So highly is it esteemed by the venerable

profession of anatomy in this institution, that he places his principal reliance, for the cure of this disease, on copious bleeding and purging actively with calomel. He has been known to bleed a child of three months old, 3 three times in a day, and to administer to the same patient thirty grains of calomel in the same length of time; by which means the child was saved. In all inflammatory diseases, bleeding should be carried to such an extent as to produce direct and immediate effects. The modus operandi of moderate and profuse bleeding is very different. The former merely reduces febrile action, without making any material impression upon the disease itself. Whereas, profuse bleeding breaks down and ~~the~~ subverts the diseased action at once. Neither is such profuse bleeding, if carried only to the extent which is required for the suppression of the disease, so debilitating as frequent and moderate bleeding.

When an attack of croup is permitted to run on

unrestrained for a considerable length of time, the inflammation descends into the bronchia and lungs producing pneumonia notha; the treatment of which I shall not detail.

Croup has likewise another termination viz. an effusion of coagulable lymph on the internal surface of the trachea, which, by the evaporation of the more fluid parts, assumes a solid form and receives the name of membrane. This membrane is sometimes expectorated, but it most frequently remains for some time, adherent to the trachea, and at length getting loose, when the patient is too far exhausted to throw it up, produces suffocation. But if the treatment above recommended be vigorously pursued, a membrane will seldom or never form. Nevertheless, when it has formed, we should, by every means in our power, promote its discharge. For this purpose, we may give a decoction of the polygala seneka, and perhaps its virtue might be increased by the addition of an equal quantity of squills.

The seneka may also be used in substance reduced to powder, with equal advantage. The credit of having first discovered the utility of the seneka in this stage of croup, is accorded to Dr. Archer of Maryland. He first used it in decoction, but subsequently in powder. The strength of the decoction must be determined by the physician. It should be made so strong as to produce in himself a considerable degree of irritation about the fauces and a desire to cough, when taken into the mouth. This degree of strength is rendered necessary by the insensibility of the larynx, and in fact of the whole body. Half an ounce of the root bruised and boiled in a close vessel with half a pint of water, down to four ounces, will in most cases be sufficiently strong. Of this a tea spoon full should be given every hour or half hour as the urgency of the case may demand; and during the intervals a few drops should be given occasionally so as to keep up a constant effect upon the throat. This should be continued until vomiting and purging are induced; it should then be given in small quantities until the

membrane is discharged, which sometimes takes place in the course of a few hours.

During the last stage of croup when a cough is the most urgent symptom, a few drops of laudanum may be given with advantage. It allays the cough and quiets the irritation about the larynx. It should be given in a little flax seed tea or some other mucilaginous drink. During convalescence, the patient should be extremely cautious of the least exposure to cold, dampness or irregularity of diet, for he is very subject to a relapse. In those cases where a membrane has formed, and all our attempts to remove it, prove abortive, Dr. Physick has proposed, as a dernier resort, to remove it by the operation of bronchotomy. But, whether or not, this will prove successful, I am not prepared to say. It is said to have proven unsuccessful, in the few instances in which it has been tried; nevertheless, I think the prospect of success which it offers, is sufficient to warrant a farther trial of it. Such vigorous measures have been opposed, upon the principle, that children

could not sustain their operation; than which there is nothing more erroneous; for it is a fact as well established as any in medicine, that children recover from severe surgical operations and from the operation of active medicines more speedily and certainly than adults. Dr. Rush says they display an uncommon tenacity of life and extraordinary recuperative powers; surviving under circumstances which would destroy adults. From these facts we are led to a very important practical conclusion, and that is, never to despair of the life of a child labouring under an acute disease; but continue to administer to the restorative principle, as long as a vital spark remains.